



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,600	08/05/2003	Rajiv Chandrasekaran	1052.013	6515
22186	7590	11/29/2004	EXAMINER	
MENDELSON AND ASSOCIATES PC 1515 MARKET STREET SUITE 715 PHILADELPHIA, PA 19102			MOTTOLA, STEVEN J	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

149

Office Action Summary	Application No.	Applicant(s)	
	10/634,600	CHANDRASEKARAN ET AL.	
	Examiner	Art Unit	
	Steven J. Mottola	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>080503</u> . | 6) <input type="checkbox"/> Other: ____ |

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The independent claims specify that the predistorted signals without amplitude information are separately amplified before combining; however, it appears from figs.4-5 that the amplitude information is restored before amplification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 & 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Raab, US pat. No. 6,252,461.

Refer to fig. 40 of the Raab patent, the description of which begins at line 32 of col. 20 of his disclosure. The signal processor 221 converts the input signal into 'phase' signals 222B and 222D that lack amplitude information and may be read as predistorted signals. Thus signal processor 221 may be read as performing the converting step of claim 1 or as the means for converting of claim 11 or as the circuitry adapted to convert of claim 12. The signals are then separately amplified by RF power amplifiers 224,226 which may be read on the like step of claim 1 or elements of claims 11-12. Then their outputs are combined in an output network 227 which may be read on the like step of claim 1 or elements of claims 11-12. Regarding claims 2 & 13, the input signal in Raab

is an RF signal and the output has amplitude information (note amplitude modulators 223,225).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-4 & 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raab US pat. No. 6,252,461.

The difference added by these claims is that the input is predistorted before being divided whereas in the Raab patent the predistortion occurs in signal processors 221A,221B after the signal is divided; however, the arrangements are functionally equivalent since in both cases the result is a predistorted and divided signal.


Claims 8-10 & 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raab US pat. No. 6,252,461 in view of the Raab article cited by applicant.

The difference between these claims and the Raab patent is the combining methods claimed. However, the specific arrangements claimed, transformer in claims 8 & 20 and transmission line tee/stubs in claims 9 & 21 are shown in figs. 2 & 3 respectively of the Raab article cited. It would have been obvious to utilize these specific combining methods as the article illustrates their use in a similar context, and the combiner in fig. 40 of the patent is rather generic; some specific structure would have to be used in any practical construction and the application of known combiners would have been an obvious modification of fig. 40 of the patent. In re claims 10 and 22, the reactances appear to be a quarter wave from the tee in fig. 3 of the Raab article.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Mottola whose telephone number is 571-272-1766. The examiner can normally be reached on M-Th from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven J. Mottola
Primary Examiner